

**AMENDMENT AND RESPONSE**

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Steelman et al.

Serial No.: 09/479,648

Filed: January 7, 2000

For: METHOD OF APPLYING ADHESIVE COATED FILM

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**REMARKS**

Claims 1-19, 32, and 33 having been cancelled, claims 20-29 having been amended, and claims 34-66 having been added, the pending claims are claims 20-31 and 34-66.

**Specification Objections/Amendments**

The objections noted in the Office Action have been addressed in the amended paragraphs. In addition, Applicants have also corrected various other typographical errors in the application as filed.

For example, the second occurrence of the word "film" in line 31 on page 5 has been corrected to read "device." A spelling error in the word "interstices" on page 6, line 3 has also been corrected in the same paragraph.

Furthermore, Applicants have deleted the last sentence of the paragraph beginning on page 6, line 17.

Entry of these amendments to the specification are respectfully requested.

Applicants also note that "[t]he specification is objected to as failing to provide proper antecedent basis for the claimed subject matter" with respect to claim 31. Applicants note, however, that claim 31 was submitted with the application as filed. At a minimum, therefore, the claim serves as its own disclosure. As for antecedent basis of the terms used in claim 31, Applicants note that all of the terms used in claim 31 are present in the specification as filed. For example, "removable adhesive" is discussed in the paragraphs beginning on page 9, line 24; page 16, line 1; page 16, line 6; etc.

Reconsideration and withdrawal of this objection are, therefore, respectfully requested.

**Miscellaneous Claim Amendments**

Applicants have also provided a number of other amendments to claims 20, 21, 25, 26, and 28 introducing the word "comprising" that do not limit the scope of the claims in any respect.

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Rather, these amendments may, in fact, broaden to scope of the claims because of the open-ended interpretation of the word "comprising."

Further, Applicants have also deleted language from claim 20 ("at an intersecting location," "the surface where," and "contacts the surface") that is believed to be superfluous. These amendments are also submitted as not limiting the scope of claim 20.

Applicants have also amended claim 20 to recite that the "pressure source comprises a Heat Neutral Pressure Source."

In addition, Applicants have also amended claim 20 to recite that "the heat source and the pressure source do not simultaneously apply heat and pressure to the same location on the film." Support for this amendment can be found in the application as originally filed at, e.g., page 7, line 18 to page 8, line 9 and page 10, line 29 to page 11, line 9.

**Rejections Under 35 U.S.C. § 112**

Claims 1-33 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

The comments regarding the phrase "Heat Neutral Pressure Source" have been noted. Although many of the claims rejected have been canceled in this response, Applicants will address the comments as the phrase does appear in many of the pending claims.

Although the phrase is not a "generally recognized term of art" as discussed in the Office Action, Applicants note that the phrase is defined in the application as filed at, e.g., page 5, lines 17-21. Furthermore, Applicants submit that claims are not required to include only "generally recognized terms of art." In view of the explicit definition of the phrase "Heat Neutral Pressure Source" in the application as filed, Applicants respectfully submit that the requirements of 35 U.S.C. § 112, second paragraph, are met by the claims including that phrase.

With respect to the comments in the Office Action regarding the use of the term "article" in the preambles of claims 20-28, Applicants have amended those claims to recite "apparatus" as

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suggested in the Office Action. It should be noted for the purposes of claim interpretation, however, that these amendments do not limit the scope of the claims in any respect. Rather, these amendments may broaden to scope of the claims because, e.g., it can be asserted that an apparatus can be composed of many different articles.

In view of the above, Applicants respectfully submit that the pending claims to satisfy the requirements of 35 U.S.C. § 112, second paragraph. Reconsideration and withdrawal of any rejections based thereon are respectfully requested.

**Rejections of Claims 20-28 under 35 U.S.C. §§ 102 & 103(a)**

Claims 20-28 were rejected under 35 U.S.C. §§ 102 & 103(a) as being unpatentable over Gladen (U.S. Patent No. 3,562,059). Applicants respectfully traverse this rejection.

Gladen discloses a conventional heated platen press in which heat and pressure are simultaneously applied over the surface of the film to laminate the film to a foam.

In contrast, Claim 20 recites an apparatus including a heat source and a pressure source, wherein the heat source and the pressure do not apply heat and pressure to the same location on the film at the same time.

As a result, Applicants respectfully submit that claim 20 and its dependent claims 21-28 are not anticipated by Gladen.

With respect to obviousness, Applicants note that no suggestion or motivation is identified that would lead one of skill in the art to separate the application of heat and pressure to the film and foam composites manufactured by Gladen.

Furthermore, many of the dependent claims recite features that are not disclosed or suggested by Gladen. For example, claims 21, 21, 24, and 27 recite heat sources that use radiant energy or hot air, neither of which are disclosed or suggested by Gladen. Also, claims 25, 26, and 28 recite constructions for the pressure source that are not disclosed or suggested by Gladen.

For the above reasons, Applicants respectfully submit that claims 20-28 are patentable

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over Gladen. Reconsideration and withdrawal of these rejections are, therefore, respectfully requested.

**Rejections of Method Claims 1-19, 29, and 32-33**

Applicants note that claims 1-19 and 32-33 have been canceled and that claim 29 now recites the method of new claim 34. As a result, Applicants respectfully submit that the rejections of these claims over Raabe et al. (U.S. Patent No. 4,370,374) or Hargarter et al. (U.S. Patent No. 5,674,600) (either alone or in view of Gladen (U.S. Patent No. 3,562,059)) have been rendered moot.

**Rejection of Claims 30 and 31**

Claims 30 and 31 were rejected over Ullmann et al. (U.S. Patent No. 6,126,011) as being anticipated or, in the alternative, obvious. Applicants traverse these rejections for the following reasons.

Independent claim recites a "Heat Neutral Pressure Source" that is not disclosed by Ullmann et al. As noted above, the phrase "Heat Neutral Pressure Source" defines a particular pressure source and there is no indication in the Office Action as to where such a pressure source is disclosed by Ullmann et al.

Further, the claims are not *prima facie* obvious. To establish a *prima facie* case of obviousness, the rejection must include an identification of some suggestion or motivation, either in the cited reference or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Also, the prior art reference must teach or suggest all the claim limitations. *See* M.P.E.P. § 2143.

Claims 30 and 31 are not *prima facie* obvious because Ullmann et al. does not teach or suggest all the claim limitations and the Office Action fails to identify some suggestion or motivation to modify the cases of Ullmann et al. to include a Heat Neutral Pressure Source in combination with a heat source.

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For the above reasons, Applicants respectfully submit that claims 30 and 31 are patentable over Ullmann et al. Reconsideration and withdrawal of this rejection are, therefore, respectfully requested.

**CONCLUSION**

It is respectfully submitted that the pending claims are in condition for allowance and notification to that effect is respectfully requested. The Examiner is invited to contact Applicants' Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

**CERTIFICATE UNDER 37 C.F.R. §1.8:**

The undersigned hereby certifies that this paper is being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on this 19th day of November 2001.

  
Kevin W. Raasch

Respectfully submitted,

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By their Representatives,

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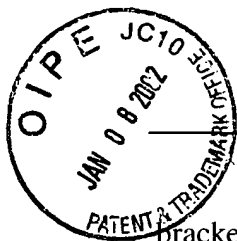
19 NOVEMBER 2001  
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APPENDIX A - AMENDMENTS INCLUDING NOTATIONS TO INDICATE CHANGES  
MADE

Serial No.: 09/479,648  
Docket No.: 54655US009



Amendments to the following are indicated by underlining what has been added and bracketing what has been deleted. Additionally, all amendments have been shaded.

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In the Specification

The paragraph beginning at page 5, line 17, has been amended as follows:

For purposes of this invention, a "Heat Neutral Pressure Source" is a pressure source that has thermal conductivity characteristics and surface characteristics at the point of contact [to] [with] the film such that the film, when nearly melted, will not adhere to the Heat Neutral Pressure Source during application in accordance with the method of the present invention to a surface.

The paragraph beginning at page 5, line 29, has been amended as follows:

With respect to the surface characteristics of the Heat Neutral Pressure Source, the film-contacting portion of the device has a geometry such that a soft or melted film does not distort or adhere to the [film] [device] in a manner that would result in tearing or other such damage to the film. Thus, for example, while cotton is a material that is low in thermal conductivity, a cotton glove may be unsuitable for use as a Heat Neutral Pressure Source for certain film materials because its surface presents fibers and other such irregularities that provide [intersticies] [interstices] for flow of a highly softened or melted film therein and furthermore adheres to many highly soften films. The surface characteristics of a cotton glove, therefore, leads to disruption of the appearance of the film in an attempt to carry out the process of this invention.

The paragraph beginning at page 6, line 17, has been amended as follows:

Preferably, the pressure source is compressive to allow full contact of the film to be adhered [to] [with] the substrate [to be adhered to]. Thus, if an intended substrate contains a rivet

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that stands out from the plane of the substrate, a pressure source that is not compressive will not conform around the protruding rivet, and thus will allow non-contact or "tenting" of the film to occur at the base of the rivet. A preferred pressure source will allow full conformation or compliance of the pressure source around any surface irregularity to be encountered in the intended application. [Preferably, the material has a Poisson's ratio of less than 1, and more preferably less than 0.9.]

### In the Claims

For convenience, all pending claims are shown below.

20. (AMENDED) An [article] apparatus for softening a film and adhering the film to a surface of a substrate, the [article] apparatus comprising:

- a) a heat source; and
- b) a pressure source;

wherein the pressure source [is heat neutral] comprises a Heat Neutral Pressure Source and wherein the heat source and the pressure source direct heat and pressure [at an intersecting location] on [the surface where] the film [contacts the surface], and further wherein the heat source and the pressure source do not simultaneously apply heat and pressure to the same location on the film.

21. (AMENDED) The [article] apparatus of Claim 20, wherein the heat source [has] comprises at least one nozzle for directing heat toward the film.

22. (AMENDED) The [article] apparatus of Claim 20, wherein the heat source operates at a temperature of greater than about 150°C.

23. (AMENDED) The [article] apparatus of Claim 20, wherein the heat source generates radiant energy.

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24. (AMENDED) The [article] apparatus of Claim 20, wherein the heat source generates hot air.

25. (AMENDED) The [article] apparatus of Claim 20, wherein the pressure source [is] comprises a roller.

26. (AMENDED) The [article] apparatus of Claim 20, wherein the pressure source [is] comprises an annulus about the heat source.

27. (AMENDED) The [article] apparatus of Claim 24, further comprising a deflector and a baffle in the line of hot air to redirect hot air from one location along the deflector to another location along the deflector.

28. (AMENDED) The [article] apparatus of Claim 20, wherein the pressure source [is] comprises a roller and wherein the film rotates on the roller prior to application to the surface.

29. (AMENDED) A method of saving labor of adhering an adhesive-coated film to a substrate having a surface, comprising [the steps of]:

- (a) distributing a film to a party that has been taught to use the method of Claim [1] 34;
- (b) optionally permitting such party to print an image on the film; and
- (c) permitting such party to use the method to adhere the film to a surface of the substrate.

34. (NEW) A method of applying an adhesive-coated film to a substrate, the method comprising:



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providing a film comprising pressure sensitive adhesive coated on a major surface of the film;  
heating the film to the softening point of the film; and  
pressing the film against a substrate with a Heat Neutral Pressure Source after heating the film, wherein the pressure sensitive adhesive on the major surface of the film adheres to the substrate.

35. (NEW) A method according to claim 34, wherein the heating comprises heating the film using hot air.

36. (NEW) A method according to claim 34, wherein the heating comprises heating the film using infrared radiation.

37. (NEW) A method according to claim 34, wherein the Heat Neutral Pressure Source comprises a Thermal Conductivity of less than 1.8 BTU/hr-in-ft<sup>2</sup>-°F.

38. (NEW) A method according to claim 34, wherein the Heat Neutral Pressure Source comprises open cell foam material.

39. (NEW) A method according to claim 34, wherein the Heat Neutral Pressure Source comprises a roller.

40. (NEW) A method according to claim 34, wherein the substrate comprises a highly textured surface.

41. (NEW) A method according to claim 34, wherein the substrate comprises a wall.

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42. (NEW) A method according to claim 34, wherein the substrate comprises a truck trailer wall.

43. (NEW) A method according to claim 34, wherein the adhesive comprises heat-activated adhesive.

44. (NEW) A method according to claim 34, wherein the adhesive comprises pressure-activated adhesive.

45. (NEW) A method of applying an adhesive-coated film to a wall, the method comprising:  
providing a film comprising adhesive coated on a major surface of the film;  
heating the film to the softening point of the film; and  
pressing the film against a wall with a Heat Neutral Pressure Source, wherein the adhesive on the major surface of the film adheres to the wall.

46. (NEW) A method according to claim 45, wherein the pressing is performed after heating the film to the softening point of the film.

47. (NEW) A method according to claim 45, wherein the heating comprises heating the film using hot air.

48. (NEW) A method according to claim 45, wherein the heating comprises heating the film using infrared radiation.

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49. (NEW) A method according to claim 45, wherein the Heat Neutral Pressure Source comprises a Thermal Conductivity of less than  $1.8 \text{ BTU/hr-in-ft}^2\text{-}^\circ\text{F}$ .

50. (NEW) A method according to claim 45, wherein the Heat Neutral Pressure Source comprises open cell foam material.

51. (NEW) A method according to claim 45, wherein the Heat Neutral Pressure Source comprises a roller.

52. (NEW) A method according to claim 45, wherein the wall comprises a highly textured surface.

53. (NEW) A method according to claim 45, wherein the wall comprises a truck trailer wall.

54. (NEW) A method according to claim 45, wherein the adhesive comprises pressure sensitive adhesive.

55. (NEW) A method according to claim 45, wherein the adhesive comprises heat-activated adhesive.

56. (NEW) A method according to claim 45, wherein the adhesive comprises pressure-activated adhesive.

57. (NEW) A method of applying an adhesive-coated film to a substrate, the method comprising:

providing a film comprising adhesive coated on a major surface of the film;

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heating the film to the softening point of the film using a heat source; and  
pressing the film against a substrate with a Heat Neutral Pressure Source, the Heat  
Neutral Pressure Source comprising a Thermal Conductivity of less than 1.8 BTU/hr-in-ft<sup>2</sup>-°F,  
wherein the adhesive on the major surface of the film adheres to the substrate.

58. (NEW) A method according to claim 57, wherein the heating comprises heating the film  
using hot air.

59. (NEW) A method according to claim 57, wherein the heating comprises heating the film  
using infrared radiation.

60. (NEW) A method according to claim 57, wherein the Heat Neutral Pressure Source  
comprises open cell foam material.

61. (NEW) A method according to claim 57, wherein the substrate comprises a highly  
textured surface.

62. (NEW) A method according to claim 57, wherein the substrate comprises a wall.

63. (NEW) A method according to claim 57, wherein the substrate comprises a truck trailer  
wall.

64. (NEW) A method according to claim 57, wherein the adhesive comprises pressure  
sensitive adhesive.

**Amendment and Response - Appendix A**

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65. (NEW) A method according to claim 57, wherein the adhesive comprises heat-activated adhesive.

66. (NEW) A method according to claim 57, wherein the adhesive comprises pressure-activated adhesive.